GENERATOR TYPE ECO 46-2L/4

Document : **DS063A/1**
issue 004 date 01/04/2014

Electrical Characteristics										
Frequency		Hz	50				60			
Voltage (parallel star)		V	380	400	415	440	415	440	460	480
Rated power class H		kVA	2500	2500	2500	2280	2700	2840	3000	3000
		kW	2000	2000	2000	1824	2160	2272	2400	2400
Rated power class F		kVA	2250	2250	2250	2050	2430	2550	2700	2700
		kW	1800	1800	1800	1640	1944	2040	2160	2160
Regulation with		DER1	±1% with any power factor and speed variations between -5% +30%							
Insulation class			H							
Execution			Brushless							
Stator winding			12 ends							
Rotor			with damping cage							
Efficiencies class H	4/4	%	96,9	96,8	96,6	96,4	96,8	97	97,2	97,1
(see graph. for details)	3/4	%	97,3	97	97,1	96,5	96,9	97,2	97,6	97,3
	2/4	%	96,7	96,6	96,6	96	96,4	96,8	97	96,9
	1/4	%	95,6	95,9	95,7	95,1	95,6	96,2	96,2	96,2
Reactances (f. l.cl. F)	Xd	%	277,0	250	232,3	201	305	281,0	272,2	250
	Xd'	%	26,3	23,7	22,0	19,1	28,9	26,64	25,8	23,7
	Xd"	%	12,7	11,5	10,7	9,3	14	12,93	12,5	11,5
	Xq	%	196,1	177	164,4	142	216	198,9	192,7	177
	Xq'	%	196,1	177	164,4	142	216	198,9	192,7	177
	Xq"	%	27,7	25,0	23	20	30,5	28,1	27,2	25
	X_2	%	18,0	16,2	15,1	13,1	20	18,21	17,6	16,2
	X_0	%	4,0	3,6	3	2,6	4,4	4,05	3,9	3,6
Short Circuit Ratio	Kcc		0,36	0,40	0,43	0,49	0,33	0,36	0,37	0,40
Time Constants	Td'	sec.	0,275							
	Td"	sec.	0,024							
	Tdo'	sec.	12,5							
	$T\alpha$	sec.	0,034							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load		Amp.	0,8	0,9	1	1,1	0,5	0,6	0,75	0,85
Excitation at full load		Amp.	3	3,1	3,2	3,3	2,9	2,8	2,9	3
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load							
Overload per 20 sec.		%	300							
Stator Winding Resistance (20°C)		Ω	0,0024							
Rotor Winding Resistance (20°C)		Ω	4,500							
Exciter Resistance (20 °C)		Ω	Rotor : 0,120				Stator : 12,90			
Heat dissipation at f.l.cl.H		W	63983	66116	70393	68116	71405	70268	69136	71679
Telephone Interference			THF < 2%				TIF < 40			
Radio interference			EN61000-6-3, EN61000-6-2. For others standards apply to factory							
Waveform Distors.(THD) at f. load		LL/LN %	2,8 / 2,6							
Waveform Distors.(THD) at no load		LL/LN %	2,7 / 2,8							
Mechanical characteristics										
Protection			IP 21 (other protection on request)							
DE bearing			6330							
NDE bearing			6324							
Weight of wound stator assembly		kg	2034							
Weight of wound rotor assembly		kg	1216							
Weight of complete generator		kg	4380							
Maximun overspeed		rpm	2250							
Unbalanced magnetic pull at f.l.cl.F		kN/mm	7							
Cooling air requirement		m^3/min	135				162			
Inertia Constant (H)		sec.	0,299				0,359			
Noise level at 1m/7m		dB(A)	97 / 86				100 / 91			

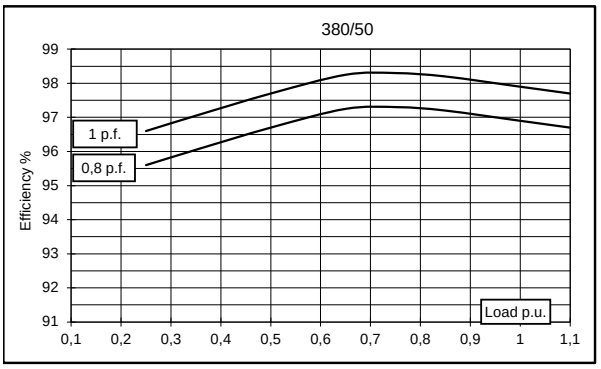
All technical data are to be considered as a reference and they can be modified without any notice.

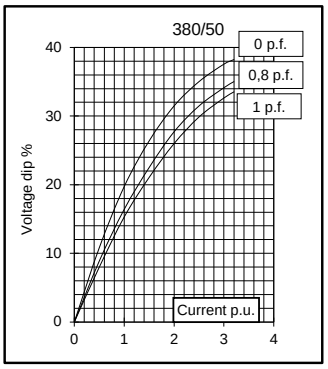
GENERATOR TYPE ECO 46-2L/4

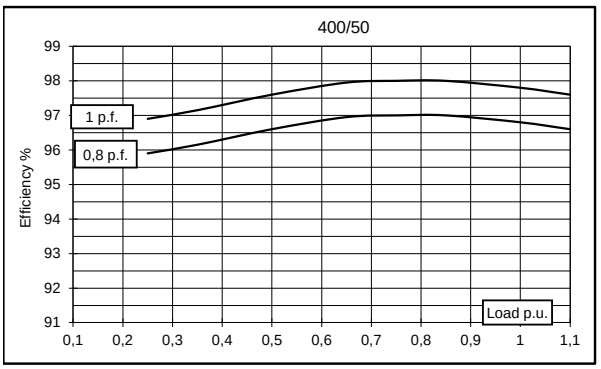
Document : **DS063A/2**

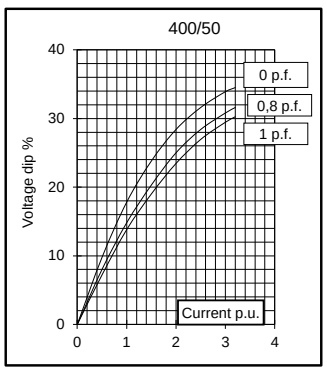
issue 004 date : 01/04/2014

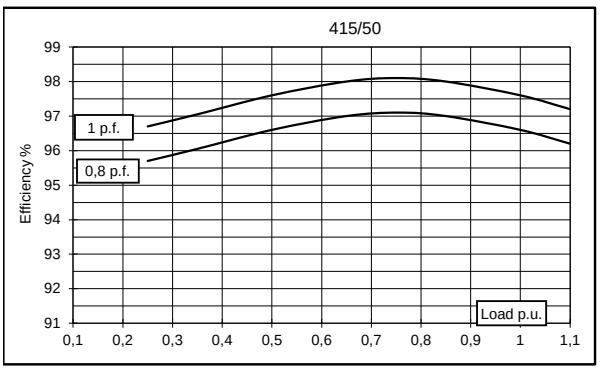
50 Hz

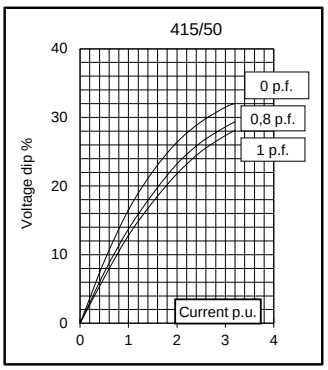


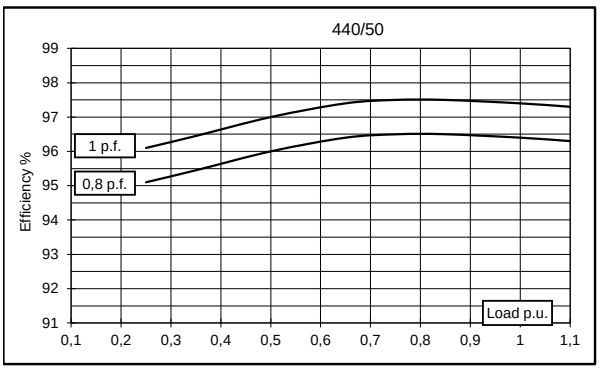


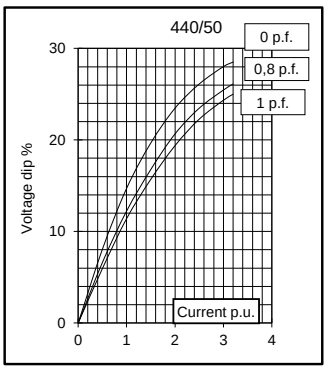


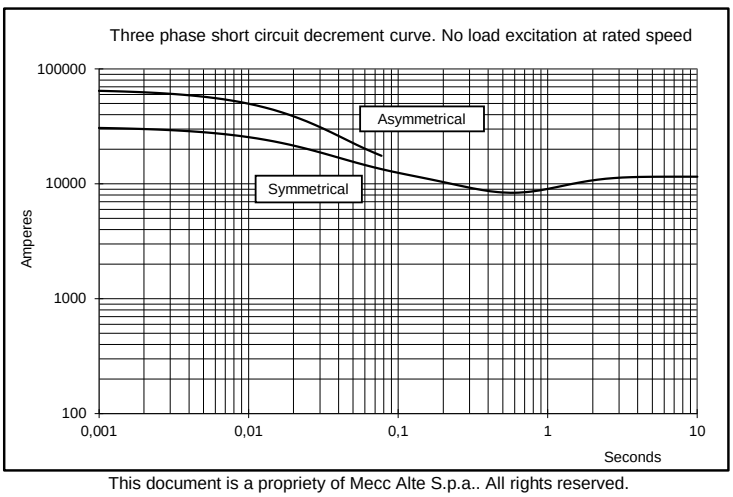










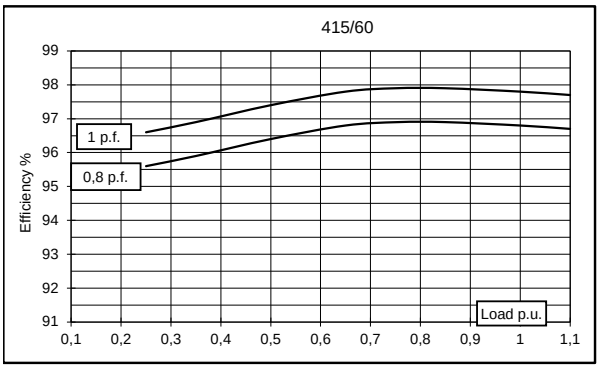


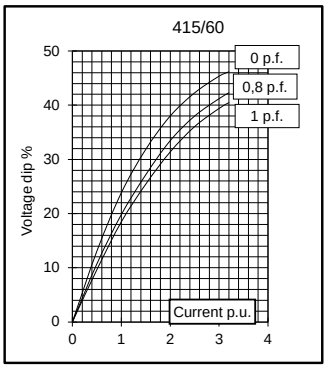
GENERATOR TYPE ECO 46-2L/4

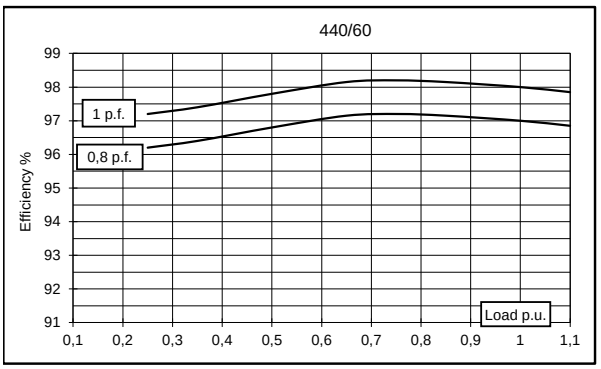
Document : **DS063A/3**

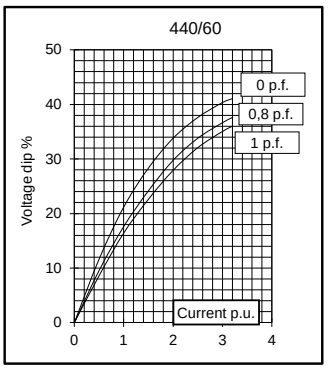
issue 004 date : 01/04/2014

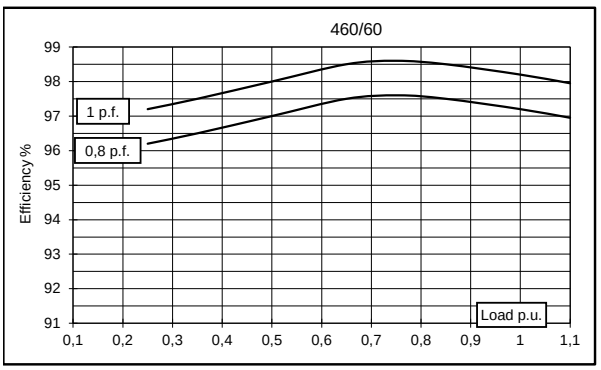
60 Hz

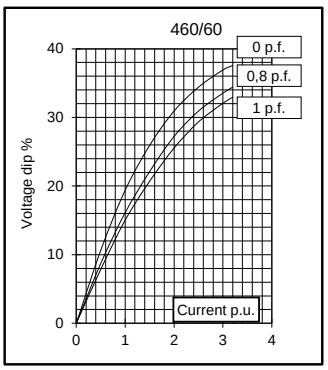


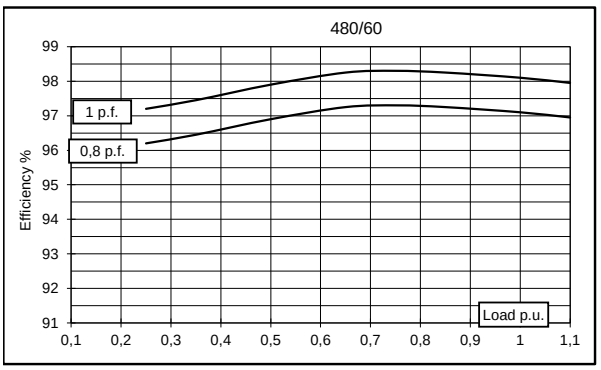


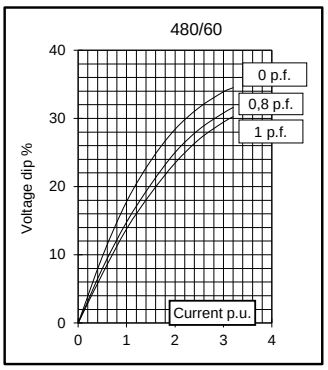


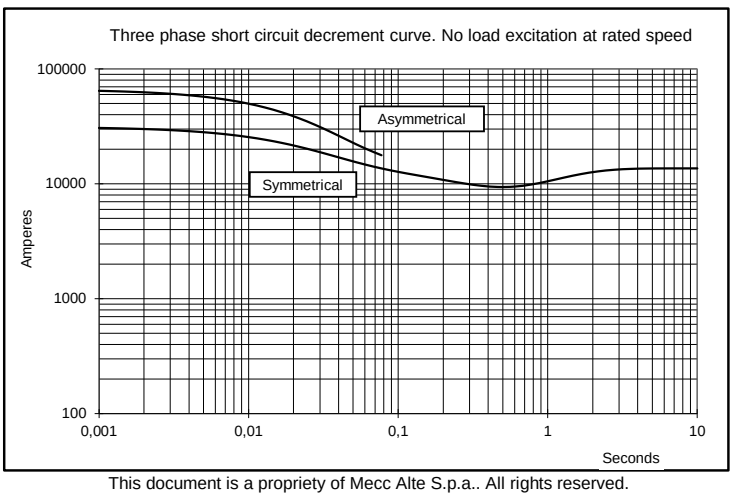




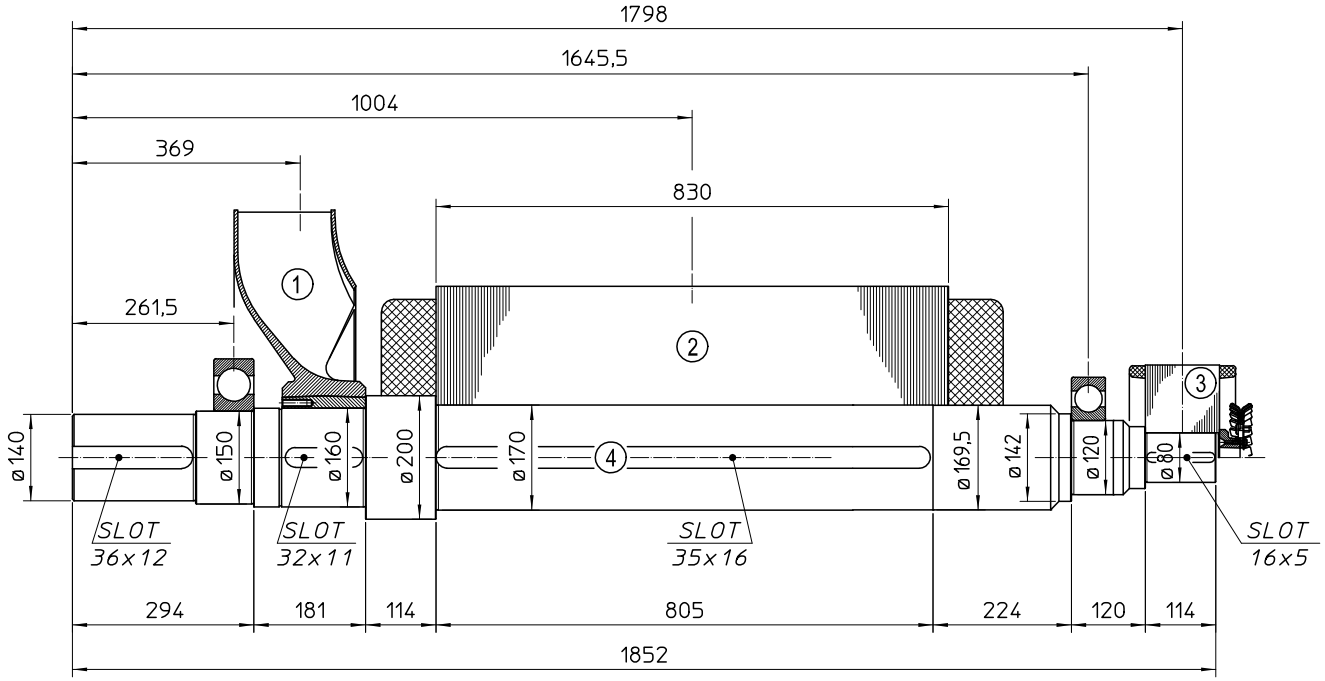






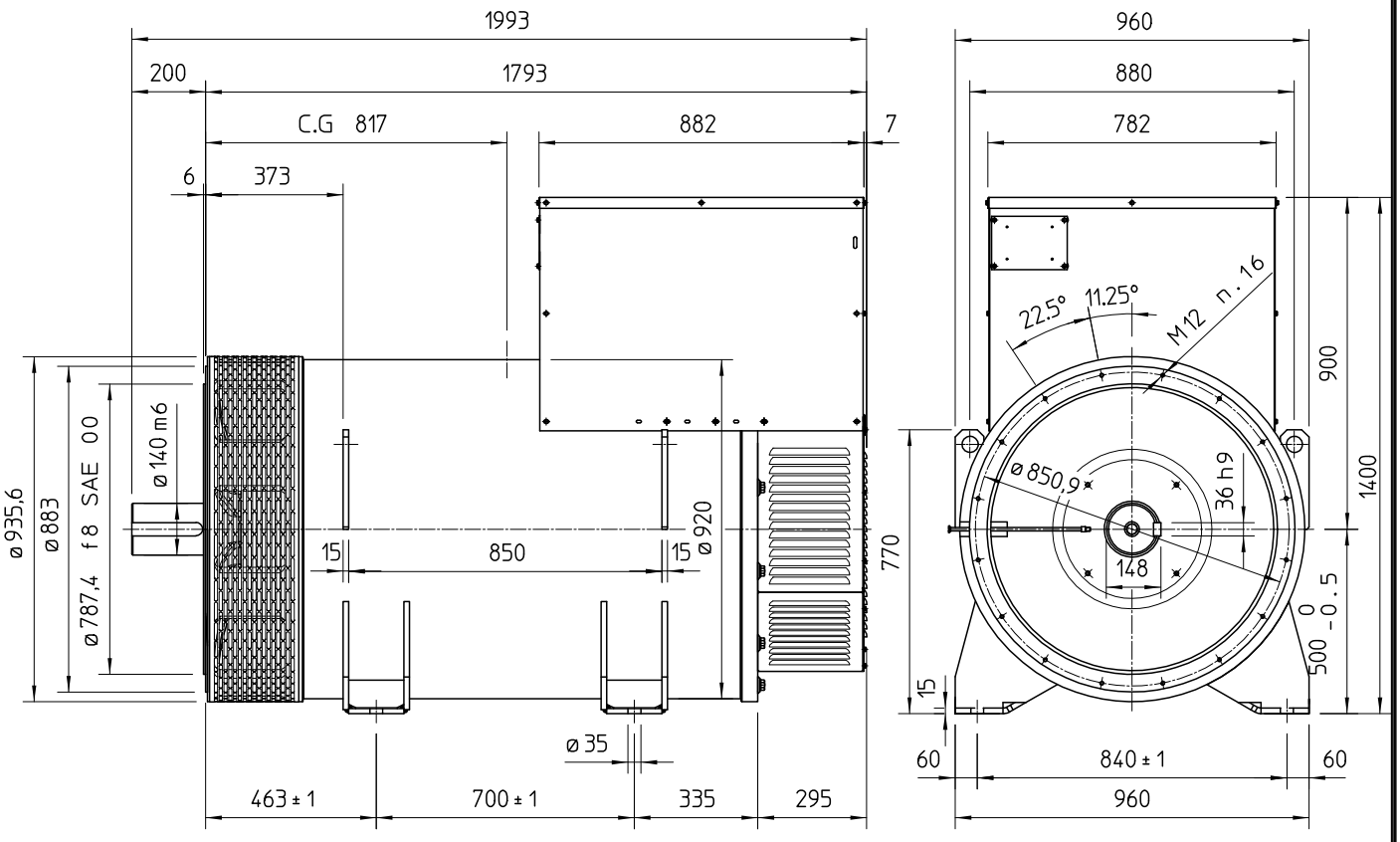


TWO BEARING MOMENTS OF INERTIA



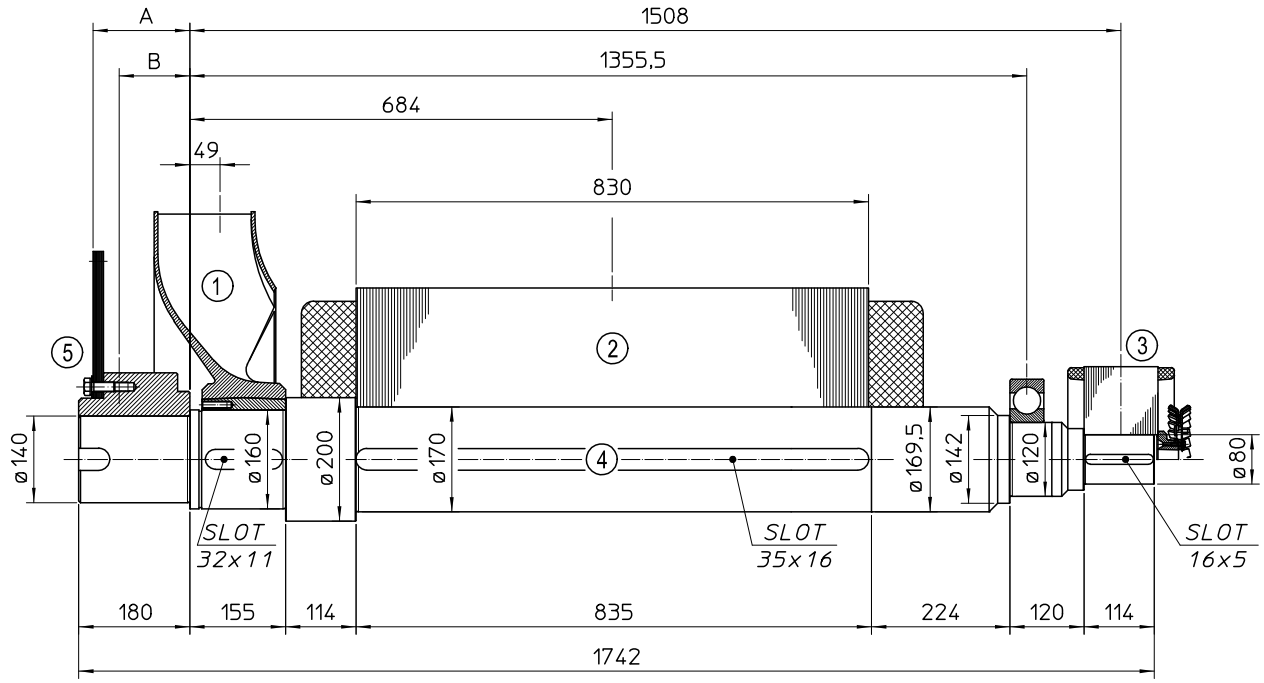
POS.	COMPONENT	WEIGHT (kg)	J (kgm^2)
1	FAN	42,7	2,250
2	MAIN ROTOR	1216	47.366
3	EX. ROTOR	60	0,730
4	SHAFT	288	0.985
TOTAL		1606.7	51.331

TWO BEARING DIMENSIONS



C.G.= GRAVITY CENTER

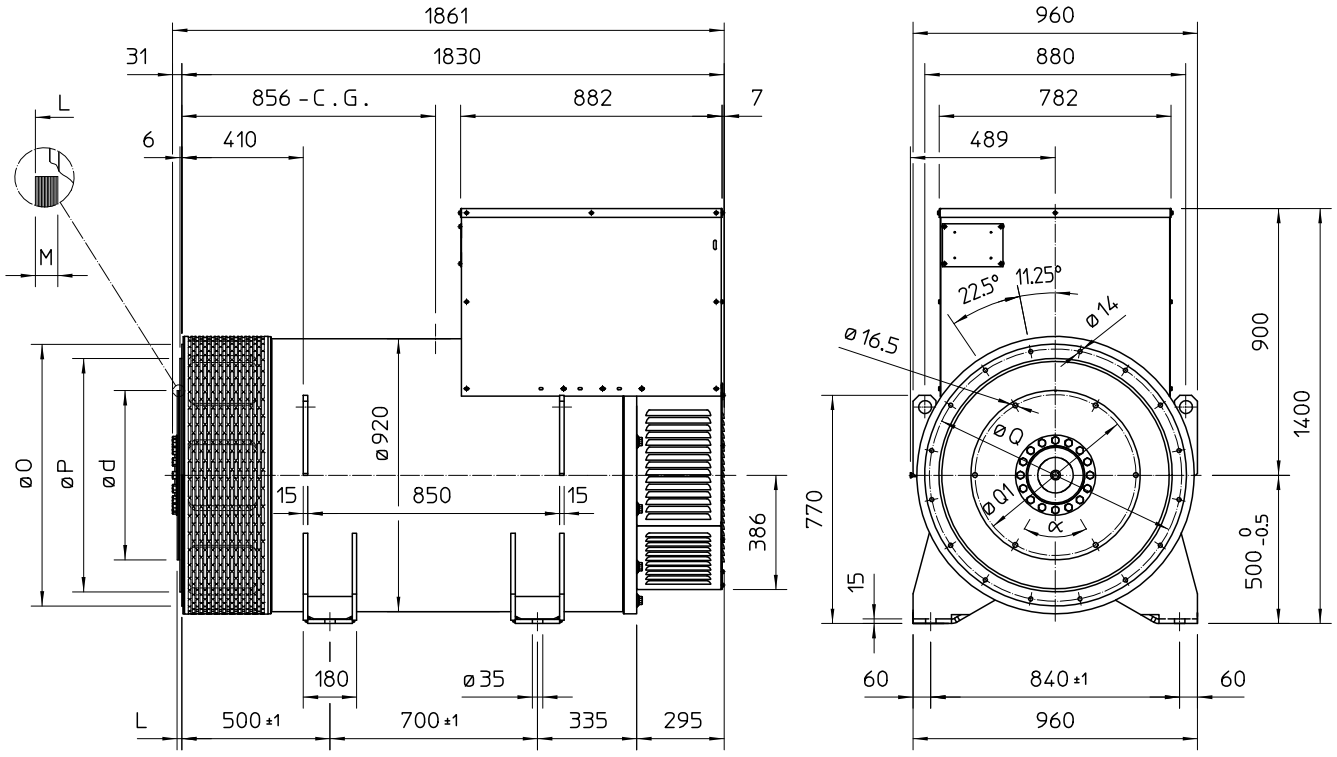
SINGLE BEARING MOMENTS OF INERTIA



POS.	COMPONENT	WEIGHT (kg)	J (kgm^2)
1	FAN	42.7	2,250
2	MAIN ROTOR	1216	47.366
3	EX. ROTOR	60	0,730
4	SHAFT	269,5	0.934
TOTAL		1588.2	51.28

SAE	5	SHAFTS COUPLING FLEX PLATE		
N°	A	B	WEIGHT kg	J kgm^2
18	172.7	113,4	82,7	1,863
21	157	114,6	93,6	3,206

SINGLE BEARING DIMENSIONS



SAE N°	FLANGE		
	O	P	Q
0	711	647.7	679.5
00	883	787.4	850.9

SAE N°	DISC COUPLING					
	d	L	M	Q1	HOLES N°	α
18	571.5	15.7	15	542.92	6	60°
21	673.1	0	17	641.35	12	30°

C.G.= GRAVITY CENTER